

Chapter 4 FRAPPY!

Student Samples Commentary

Sample #1

In part (a), the response describes a completely randomized design, but doesn't include sufficient detail about the random assignment process. The response doesn't indicate that the note cards need to be shuffled and doesn't identify which treatments correspond to A and B. Part (a) was scored partially correct (P). In part (b), the response identifies the larger scope of inference as the benefit. However, the response states that the results can be applied to "all people," instead of just people with moderate, severe, or very severe symptoms. This was judged to be a minor error with no loss of credit. The response also provides the correct drawback, stating that there will be more variation in the response variable ("results"). Part (b) was scored essentially correct (E). In part (c), the response correctly states that the results could be due to random chance, but does not address the random assignment to treatments or answer in context. Part (c) was scored partially correct (P). In part (d), the response correctly forms blocks based on severity of symptoms and randomly assigns treatments within each block. Part (d) was scored essentially correct (E). With two parts essentially correct and two parts partially correct, the entire answer judged substantial and earned a score of 3.

Sample #2

In part (a), the response describes a completely randomized design, but doesn't include sufficient detail about the random assignment process. The response doesn't describe how to use the random number generator. Also, flipping a coin to determine which group receives which treatment is unnecessary, as the groups were formed at random. Part (a) was scored partially correct (P). In part (b), the response identifies a larger population as the benefit. However, because the response doesn't address the ability to make an inference about a larger population, no credit is earned for the benefit. The response identifies confounding between symptoms and treatments as the drawback, but these variables will not be confounded in a completely randomized design. Because neither the benefit nor the drawback are correct, part (b) was scored incorrect (I). In part (c), the response does not address the need to consider the role of chance when determining statistical significance. Part (c) was scored incorrect (I). In part (d), the response correctly describes forming blocks based on severity of symptoms but does not indicate that the treatments should be randomly assigned within each block. Part (d) was scored partially correct (P). With two parts partially correct and two parts incorrect, the entire answer was judged minimal and earned a score of 1.